REVIEW OF THE GENUS *PSEUDINDALMUS*, WITH DESCRIPTION OF A NEW SPECIES (COLEOPTERA: ENDOMYCHIDAE)

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Abstract

Seven species, including *Mycetina depressa* Gerstaecker, are redescribed with diagnostic figures. *Ps. javanicus* n. sp. is added. Translations of Pic's descriptions of *Ps. testaceitarsis* and *Falsodanae rufonotata* are included.

Some years ago I was able through a grant from NSF to visit several European museums. Access to type specimens and other courtesies were extended to me by officers of these institutions: J. Balfour-Browne and M. E. Bacchus, British Museum(BM); A. Descarpentries, Paris Museum(PM); and Sven Larsson, Copenhagen Museum(UM). Additionally, I have been able to study material sent by R. D. Pope (British Museum), F. Hieke (Berlin Museum), J. L. Gressitt (Bishop Museum), and A.M.R. Wegner (formerly at Bogor Museum). FSCA refers to Florida State Collection of Arthropods.

Genus *Pseudindalmus* Arrow

Pseudindalmus Arrow 1920a:330. Type species: *Ps. tonkinensis* Arrow.

The species referred to this Oriental genus resemble those of *Mycetina* rather closely. In both genera the pronotum has sides parallel from base to beyond middle, then rapidly and evenly rounded to the short rectangular front angles; lateral sulci broadly triangular, transverse sulcus straight and rather deep; basal margin weakly arcuate and slightly elevated. In *Pseudindalmus* the elytra are 3X or more as long as pronotum, giving the insects a long-oval outline. The antenna has articles 9-10 angularly widened with tendency in males to bulbous enlargement of article 9. Spinasternum prolonged behind front coxae, linguiform, rounded at tip. Intercoxal mesosternum a narrow trapezoid, its very short anterior side normally covered by tip of spinasternum. In *Mycetina* the base of trapezoidal mesosternum is about equal to sides.

From study of aedeagi it appears that the species placed in *Pseudindalmus* may have been derived along 2 or more lines from *Mycetina,* which genus itself, while presenting fairly uniform external features, shows remarkable diversity in form of aedeagus.

Key to species of *Pseudindalmus*

1. Elytron with 1(posterior) orange spot ..... (8) *Ps. biguttatus*
1′. Elytron with 2 orange or yellow spots 2

2(1′). Anterior spot not reaching humeral angle 3
2′. Anterior spot touching humeral angle..... 5

3(2). Entirely black except elytral spots ..... (6) *Ps. javanicus*
3′. Pronotum in part reddish..... 4

4(3′). Head and legs "deep red"(Borneo)..... (3) *Ps. borneensis*
4′. Head and legs black(Singapore) ..... (4) *Ps. quadrimaculatus*

5(2′). Venter and legs black ..... (7) *Ps. tonkinensis*
5′. Venter and legs red 6

6(5′). Pronotum wholly red ..... (1) *Ps. depressus*
6′. Pronotal disc infuscate..... 7

7(6′). Elytral punctures fine and well-spaced..... (5) *Ps. malaccanus*
7′. Elytral punctures rather coarse and dense..... (2) *Ps. andamanicus*

1. *Pseudindalmus depressus*(Gerstaecker), **new combination**
Fig. 1

Mycetina depressa Gerstaecker 1858:235. Monotype:female from Penang I. (UM).

Pseudindalmus malayensis Arrow 1923:486; Strohecker 1953:pl.4,fig.41. Lectotype(Monotype?):male from Singapore, C.J.Saunders(BM). **New synonymy.**

Under surface, legs, antennomere 1, head, and pronotum red. Elytra black, each with 2 large orange patches. Antenna stout, article 3 longer than wide, following articles each nearly quadrate and progressively wider, article 9 very large, globosely swollen above but concave beneath in male, triangular in female. Elytra closely and rather coarsely punctate, side margin as wide as middle tibia. Length 5-5.5 mm.

A male from Penang I.(FSCA ex Janson) has been closely compared with the monotype of *M. depressa* and conforms entirely with it except in antennal structure and in a slight curvature of the middle tibia. This male is certainly conspecific with *Ps. malayensis*.

2. *Pseudindalmus andamanicus* Arrow
Fig. 2

Pseudindalmus andamanicus Arrow 1920b:33;1925:339,fig.62.

Resembles the preceding rather closely but is a little larger and with narrower elytral margins. Male with antennomere 9 inflated, front trochanters spiniform, and front tibia bluntly toothed near base. Length 5-6 mm.

Lectotype:male from Andaman Is., Roepstorff(BM). Paralectotypes: 5 males, 6 females with same data as lectotype(BM;FSCA).

3. *Pseudindalmus borneensis* Arrow
Fig. 6

Pseudindalmus borneensis Arrow 1920b:34.

". . . rather smaller than [*Ps. tonkinensis, Ps. andamanicus*] and more glossy, the elytra especially being much more finely punctured. The head and legs are deep red in the type specimen and the pronotum is bright red in front but becomes gradually darker towards the base. The elytra are less broadly rounded at the sides than in *P. tonkinensis*—with less conspicuously flattened margins. In the male the ninth

joint of the antenna is larger than the 10th, but scarcely as large as the 11th. Length 5 mm, width 2.5 mm."

Monotype: male from Sabah: Sandakan, C. F. Baker(BM). I have identified 2 females as this species: S. O. Borneo, Grabowsky(Berlin); Sarawak: Serikei Distr., Rajang Delta, VII-1958, T. C. Maa(Bishop).

4. *Pseudindalmus quadrimaculatus*(Pic), **new combination**

Fig. 5

Mycetina IV-maculata Pic 1930:9.

The head and legs of the type are blackish; otherwise the description of *Ps. borneensis* fits it closely. The aedeagus in both species is a long, slender, undulant tube. Extreme similarity suggests conspecificity but additional material will be needed for such a decision.

Monotype: male from Singapore(PM).

5. *Pseudindalmus malaccanus*(Pic), **new combination**

Fig. 3

Mycetina malaccana Pic 1930:9.

Venter, legs, head, and front and sides of pronotum red. Elytra black with usual 2 pale patches on each; anterior spot touches humeral angle, and its front edge runs mesad and back at an angle of 45° with base; surface conspicuously but not coarsely punctate. Male with antennomere 9 enlarged, with outline of a right triangle but somewhat bulbous above; hind tibia weakly curved and abruptly widened beyond middle. Length 4.5-5 mm.

Monotype: female from Singapore (PM). Two males, 4 females taken at Singapore by C. J. Saunders are in BM.

6. *Pseudindalmus javanicus* Strohecker, **new species**

Fig. 4

Black, strongly shining, tarsi reddish, each elytron with 2 orange patches, anterior spot behind umbo, almost touching flattened margin but remote from suture, posterior spot on caudal slope. Antenna of male 2.3 mm long, articles 3-5 each slightly longer than wide, 6-8 about as wide as long, 9 triangular, somewhat enlarged, 10 transversely triangular, 11 suborbicular but slightly truncate. Pronotum finely, elytra thickly and conspicuously but not coarsely punctate. Length 5.4-6, width 2.8-3.4 mm.

Holotype: male from Java: Preanger, Tankoeban Prahoe, 4000-5000 Voet, VI-1933, F. C. Drescher (Leiden Museum).

Allotype: female with same data except taken X-1933 (Leiden).

Paratypes: 5 males, 2 females from Tankoeban Prahoe, VI-XI-1933, F. C. Drescher and II-1938, R. W. Becking (FSCA; BM). A considerable series was returned by me some years ago to Bogor Museum determined as *Ps. depressus.*

7. *Pseudindalmus tonkinensis* Arrow

Fig. 7

Pseudindalmus tonkinensis Arrow 1920a:331; 1928:353.

Larger and of broader form than any of the preceding species and with sides of elytra more arcuate, side margins narrow. Entirely black except 4 orange elytral spots. Antenna stout, each of stalk articles nearly or quite as wide as long, article 9 of male enlarged and roundly produced mesad at apex, that of female about equal to 10, each of these with outline of right triangle. Pronotum with marginal bead

thickened and slightly reflexed, narrower toward front; disc shining, finely punctate. Elytra finely punctate, interspaces much wider than a puncture. Anterior spot touching humeral angle, its front edge inclined meso-caudad at 45° angle to base. Length 6-7, width 3.5-3.7 mm.

Lectotype: male from Laos: Haut Mekong, Muong Sing, 18-IV-1918, R. V. de Salvaza (BM). Pic (1929:35) cites co-types in Vitalis collection. Viet Nam: Annam, Dalat, 29-III-1924, R. V. de Salvaza, 2 males (BM); Tonkin, VI-17, R. V. de S., female (BM); Dalat, 29-IV/4-V-1960, S. & L. Quate, male, female (Bishop; FSCA). Laos: Vientiane area, Ban Van Eue, Mar. 1966, female (Bishop).

8. *Pseudindalmus biguttatus* Strohecker
Fig. 8

Pseudindalmus biguttatus Strohecker 1939:120.

Ventral surface, legs, antennomere 1, head, and pronotum red. Elytra deep black, each with large, quadrate orange patch between middle and apex, patch only narrowly separated from margin and suture. Entire insect strongly shining as though lacquered, much flattened. Punctures of pronotum and elytra extremely fine and widely separated. Antenna stout, article 3 somewhat longer than wide, other stalk articles progressively shorter, article 9 (male) weakly swollen, convex above, flattened below. Front tibia of male widened from base to beyond middle, thence inner edge shallowly excavate to apex. I have seen only the (Mono) type. Length 7, width 3.7 mm.

Monotype male from Sangir I. (FSCA ex Janson).

Taxa dubia

Although Pic noted the types of the following 2 species were in his collection, neither Descarpentries nor I succeeded in finding them. Both types were ascribed to Tonkin.

Pseudindalmus testaceitarsis Pic

Pseudindalmus testaceitarsis Pic 1926:10; 1929:3; Arrow 1928:353.

Oblong, shining, minutely and sparsely punctured, black, tarsi testaceous, elytra with reddish-yellow band at shoulder and behind, anterior patch external and rather wide, second discoidal. Differs at first sight from *Ps. tonkinensis* Arrow by the testaceous tarsi and different elytral markings. Length 5 mm.

Synonymized with *Ps. tonkinensis* by Arrow (1928:l.c.) but this action protested by Pic (1929:l.c.), who proposed for it the subgenus *Mycetinina* of *Mycetina*. The "regularly enlarged" antennal club would seem to displace it from *Pseudindalmus*.

?Pseudindalmus rufonotatus (Pic)

Falsodanae rufonotata Pic 1940:11.

Oblong-elongate, shining, red, disc of pronotum infuscate, elytra black, with reddish-yellow patch at shoulder and behind middle, legs red; pronotum transverse; elytra somewhat elongate, sides slightly subarcuate and broadly margined, apex attenuate; tibiae simple, hind tibiae not ciliate. Length 5-5.5 mm.

According to Pic's generic description, antennomere 9 is strongly dilated in male, simple and slightly transverse in female. Although Pic placed *Falsodanae* near *Danae* on the basis of male antennal structure, he noted pronotal similarity to that of *Pseudindalmus,* to which genus I assigned it in my catalogue (1953:96).

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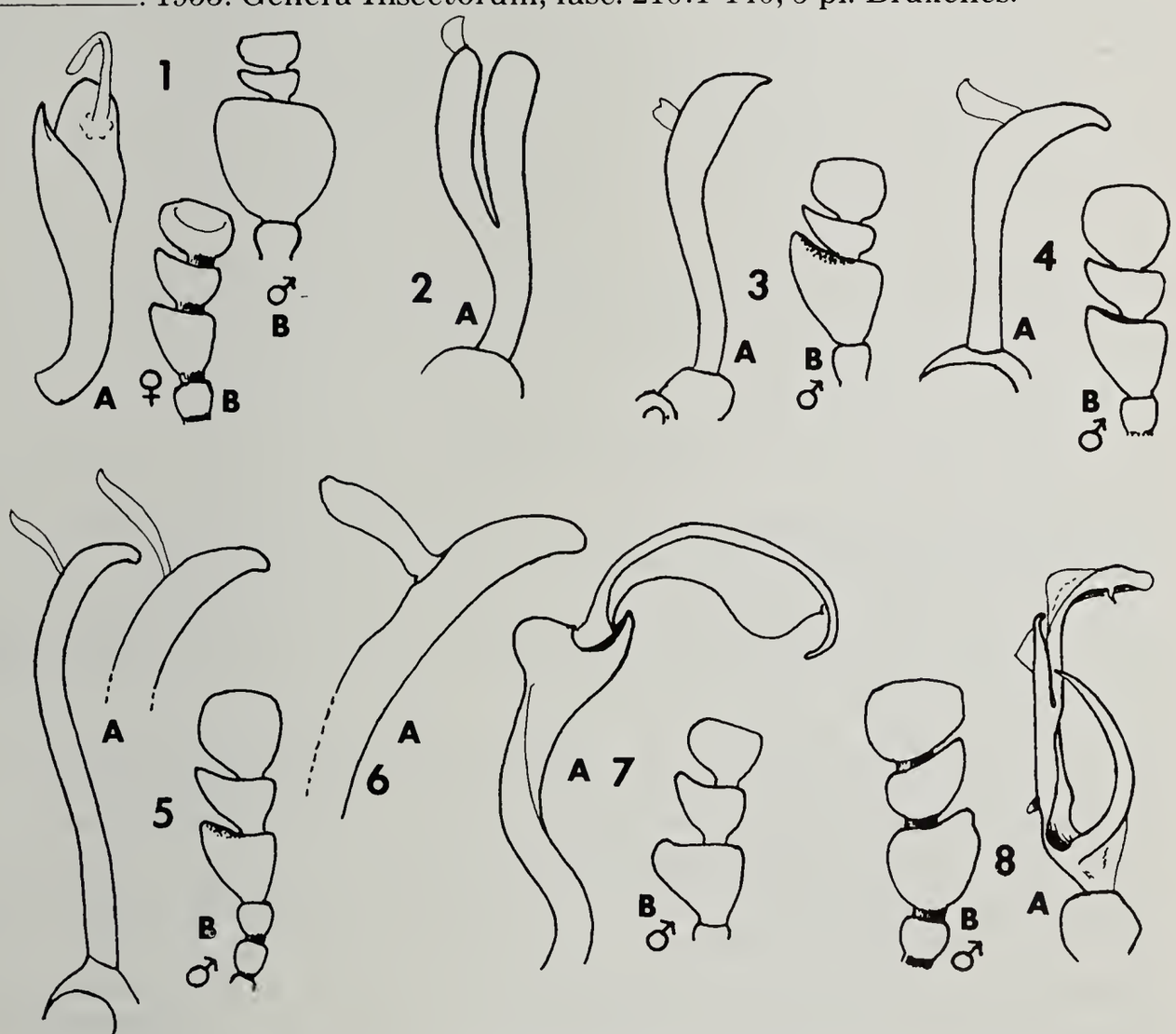

Figs. 1-8. A) aedeagus, ventral face except 8A, right side. B) antennal club, right except 8B, left. 1) *Pseudindalmus depressus* (Gerst.)—topotype. 2) *Ps. andamanicus* Arrow—lectotype. 3) *Ps. malaccanus* (Pic)—topotype. 4) *Ps. javanicus* n.sp.—holotype. 5) *Ps. quadrimaculatus* (Pic)—monotype. 6) *Ps. borneensis* Arrow—monotype. 7) *Ps. tonkinensis* Arrow—lectotype. 8) *Ps. biguttatus* Strohecker—monotype.